

**Open Access**

Poster presentation

**Simplification from TPV/RTV 500/200 BID to TPV/RTV 500/100 BID guided by therapeutic drug monitoring**

J Morello\*, S Rodríguez-Nóvoa, F Blanco, I Jiménez-Nácher, G González-Pardo, AJ Rubio and V Soriano

Address: Hospital Carlos III, Madrid, Spain

\* Corresponding author

from Ninth International Congress on Drug Therapy in HIV Infection  
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

*Journal of the International AIDS Society* 2008, **11**(Suppl 1):P66 doi:10.1186/1758-2652-11-S1-P66This abstract is available from: <http://www.jiasociety.org/content/11/S1/P66>

© 2008 Morello et al; licensee BioMed Central Ltd.

**Background**

Tipranavir/ritonavir (TPV/r) is a potent protease inhibitor (PI), whose most frequent grade 3/4 toxicity is ALT, AST and lipids elevations. These alterations seem to be associated to TPV exposure, being lower with TPV/r 500/100 mg BID than using TPV/r 500/200 mg BID. Therefore, the tolerance of TPV/r could be improved by reducing ritonavir dose; however, this strategy could be adequate as long as the virological response is not compromised. In this regards, therapeutic drug monitoring (TDM) of TPV could be helpful.

**Methods**

A prospective study was initiated in HIV antiretroviral-experienced patients with plasma HIV-RNA <50 copies/mL under a TPV/r 500/200-based regimen for longer than 24 weeks. Patients were randomized to stay on the same TPV/r dosing or to switch to TPV/r 500/100 BID. TPV plasma trough concentrations had to be above the C<sub>min</sub> (≥20.5 ug/mL) before recruitment in the study. Lipids and liver enzymes were recorded at baseline and at week 12 of follow-up. TPV C<sub>trough</sub> was measured using a validated HPLC-UV.

**Summary of results**

A total of 10 patients were recruited in the study, five on TPV/r 500/200 BID and five on TPV/r 500/100 BID. All were male; mean [range] age, 45 [40–54] years; CD4 count, 550 [390–646] cells/μl; AST, 36 [20–83]; ALT, 29 [16–140]; total cholesterol, 205 [179–261]; triglycerides,

134 [104–384]. While TPV C<sub>trough</sub> at week 12 remained significantly unchanged in patients on stable TPV/r 500/200 BID, all patients switched to TPV/r 500/100 BID experienced a drop in TPV C<sub>trough</sub> ranging from 9 to 30%.

Four out of five patients switched to TPV/r 500/100 showed a decline in AST, ALT and total cholesterol (drop ranging from 5 to 45%, 15 to 49%, and 2 to 22%, respectively). In contrast, triglycerides only diminished in two patients (7% and 61%, respectively). In all five patients, plasma HIV-RNA remained undetectable at week 12. However, three patients showed sub-therapeutic TPV C<sub>trough</sub> and accordingly treatment was modified. The other two patients have maintained undetectable viral load with similar benefit in lipids and liver enzymes over 12 months of follow-up.

**Conclusion**

A subset of antiretroviral-experienced patients on successful TPV/r 500/200 BID based regimens could benefit from ritonavir dose reductions, which may be associated with improvements in liver enzymes and lipids. However, due to large inter-individual differences in TPV C<sub>trough</sub>, this strategy should only be performed using TDM. (Table 1.)

Table 1:

Pts.	Conco mitant ARV	Major mutati ons	HCV	Baseline (TPV50 0/ RTV200 )					Week 12 (TPV500 / RTV100)						
					TPV Ctough	AST	ALT	Choles terol	Triglyc erides	TPV Ctough	Therap eutic Levels	AST	ALT	Choles terol	Triglyc erides
1	ABC 3TC AZT	10 V, 47 V, 54 V	Yes	45,4		83	140	179	134	↓ 17%	Yes	↓ 45%	↓ 49%	↓ 9%	↓ 7%
2	TDF FTC RAL	84 V	No	37,5		20	16	261	127	↓ 30%	No	↑ 50%	0%	↓ 13%	↑ 25%
3	TDF FTC RAL	No data	No	24,9		20	27	194	104	↓ 18%	No	↓ 5%	↓ 15%	0%	↑ 123%
4	TDF FTC	None	No	29,6		37	73	245	384	↓ 14%	Yes	↓ 19%	↓ 49%	↓ 22%	↓ 61%
5	ABC 3TC AZT	None	No	22,8		24	29	205	229	↓ 9%	No	↓ 33%	↓ 35%	↓ 2%	↑ 40%

Outcome in antiretroviral-experienced HIV patients on TPV/r switched from 500/200 to 500/100 BID.

Publish with **BioMed Central** and every scientist can read your work free of charge

*"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."*

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:  
[http://www.biomedcentral.com/info/publishing\\_adv.asp](http://www.biomedcentral.com/info/publishing_adv.asp)

